

**From:** Linnemanstons, Leo <Leo.Linnemanstons@aecom.com>  
**Sent:** Wednesday, May 24, 2023 10:40 PM  
**To:** Buser, David - DNR; Grittner, Paul V - DNR  
**Cc:** Neumann, Doug; Schultz, Tory  
**Subject:** West Bend LF - Groundwater Sampling Methodology Update (PDB)  
**Attachments:** WestBendLF\_WDNR\_GW\_SampleMethodUpdate\_PDB\_20230524.pdf

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Hi, David and Paul.

On behalf of the City of West Bend, AECOM is providing the attached PDF copy of a technical memorandum updating the groundwater sampling method used for groundwater sample collection at the Schuster Drive Landfill. Prompted by literature research and comparison testing, the memorandum provides our demonstration results and rationale for using passive diffusion bag (PDB) methodology for the collection of VOC water samples in monitoring wells at the landfill. Based on favorable results from the demonstration tests, we are implementing the PDB methodology for the current annual groundwater monitoring event (June 2023). We will provide further discussion on the PDB methodology and the comparative results for the annual event in the landfill monitoring report.

Please let us know if you have any questions or comments on the update to the groundwater sampling methodology. Thanks!

**Leo B. Linnemanstons, P.G.**  
Senior Project Hydrogeologist  
Environment  
D 608-828-8208  
[leo.linnemanstons@aecom.com](mailto:leo.linnemanstons@aecom.com)

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AECOM  
1555 N. River Center Drive, Ste 214  
Milwaukee, WI 53212

414.944.6080      tel  
414.944.6081      fax

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To            David Buser, WDNR – Waste & Materials Management  
              Paul Grittner, WDNR – Remediation & Redevelopment

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CC            Doug Neumann, City of West Bend

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Subject      Groundwater Sampling Methodology Update,  
              Comparison Bailer Collection vs. Passive Diffusion Bag (PDB)  
              Schuster Drive Landfill, City of West Bend, Wisconsin  
              SW License #: 0224; FID# 267059320

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From         Leo Linnemanstons; AECOM  
              Tory Schultz, AECOM

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Date         May 24, 2023

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The purpose of this technical memorandum is to notify the Wisconsin Department of Natural Resources (WDNR) that AECOM is updating the groundwater sampling methodology for the Schuster Drive Landfill on behalf of the City of West Bend (City). Earlier this year AECOM became aware of a recent United States Geological Survey (USGS) study that found close agreement between concentrations of volatile organic compounds (VOCs) samples collected by passive diffusion samplers and traditional purging methods. Passive diffusion samplers offer the following advantages over traditional purging methods:

- Eliminate the need to purge water prior to sampling;
- Eliminate the potential for cross-contamination from non-dedicated sampling equipment;
- Reduces sample collection times substantially;
- Maintains consistency of VOC results from water samples; and,
- Reduces the generation of investigation derived waste (IDW) related to groundwater sampling activities (i.e., LDPE tubing, silicone tubing, bailers, etc.).

To demonstrate the efficacy of Passive Diffusion Bags (PDBs) for collection of representative water samples from monitoring wells for VOC analysis at the Schuster Drive Landfill, AECOM conducted a direct comparison between PDBs and traditional bailer methods in April and May 2023.

### **Sampling Method Demonstration**

For this demonstration, AECOM collected comparative groundwater samples from monitoring wells MW-10D and TW-15 using both a Passive Diffusion Bag (PDB) sample method and a bailer collection method. The monitoring well locations are depicted on Figure 1. The two monitoring wells were selected because they are sampled quarterly and have a long, well established VOC concentration record. Both wells have detections of the chlorinated VOCs associated with the landfill, but they represent different ranges of VOC concentrations. TW-15 results represent the relatively low range VOC concentrations (<4 ug/L), and MW-10D results represent the relatively high range VOC concentrations (<50 ug/L).

The PDBs were deployed on April 21, 2023 and allowed to equilibrate for two weeks prior to sample collection on May 5, 2023. PDB samples were collected prior to bailer samples at both MW-10D and TW-15. Prior to collecting bailer samples, AECOM personnel removed all PDB tether and associated sampling media from inside the well casing and then purged each well, respectively. After standard purging of each monitoring well, the bailer samples were collected in accordance with standard procedures.

Groundwater samples from the PDB and bailers were transferred directly into laboratory-prepared 40-mL vial containing hydrochloric acid preservative. Trip blanks were submitted for analysis for quality control purposes. The PDB and bailer samples were packaged separately on ice in insulated rigid coolers with individual chain-of-custody forms. The two coolers were transported by overnight courier to Pace Analytical (a Wisconsin-certified laboratory) in Green Bay, Wisconsin. Both sets of water samples were analyzed for VOCs using SW846 Method 8260. The separate PDB and bailer laboratory reports are presented in Appendix A and B, respectively.

### **Results Comparison**

Groundwater VOC results from the PDB and bailer water samples collected from monitoring wells TW-15 and MW-10D on May 5, 2023 are summarized for comparison on Table 1. Comparison of the two sets of results indicates that detected VOC concentrations from PDB samples on average are within 10% of the traditional bailer collected samples. This outcome is consistent with the findings of the referenced USGS report and supports that the collection methodology does not significantly affect the VOC results.

Because of the consistency demonstrated using the PDB methodology and the other anticipated advantages to its implementation, AECOM will begin using PDB sampling for the current annual groundwater monitoring event (June 2023). Specific monitoring wells where the PDB sample methodology will be implemented going forward are identified in Table 2. Further discussion of the updated sampling methodology will be provided in the Landfill Groundwater Monitoring Report.

Should you have any questions or comments regarding the use of the PDB sampling methodology, please contact Leo Linnemanstons at (608) 828-8208.

Sincerely,

Tory A. Schultz  
Project Manager

Leo B. Linnemanstons, P.G.  
Senior Project Hydrogeologist

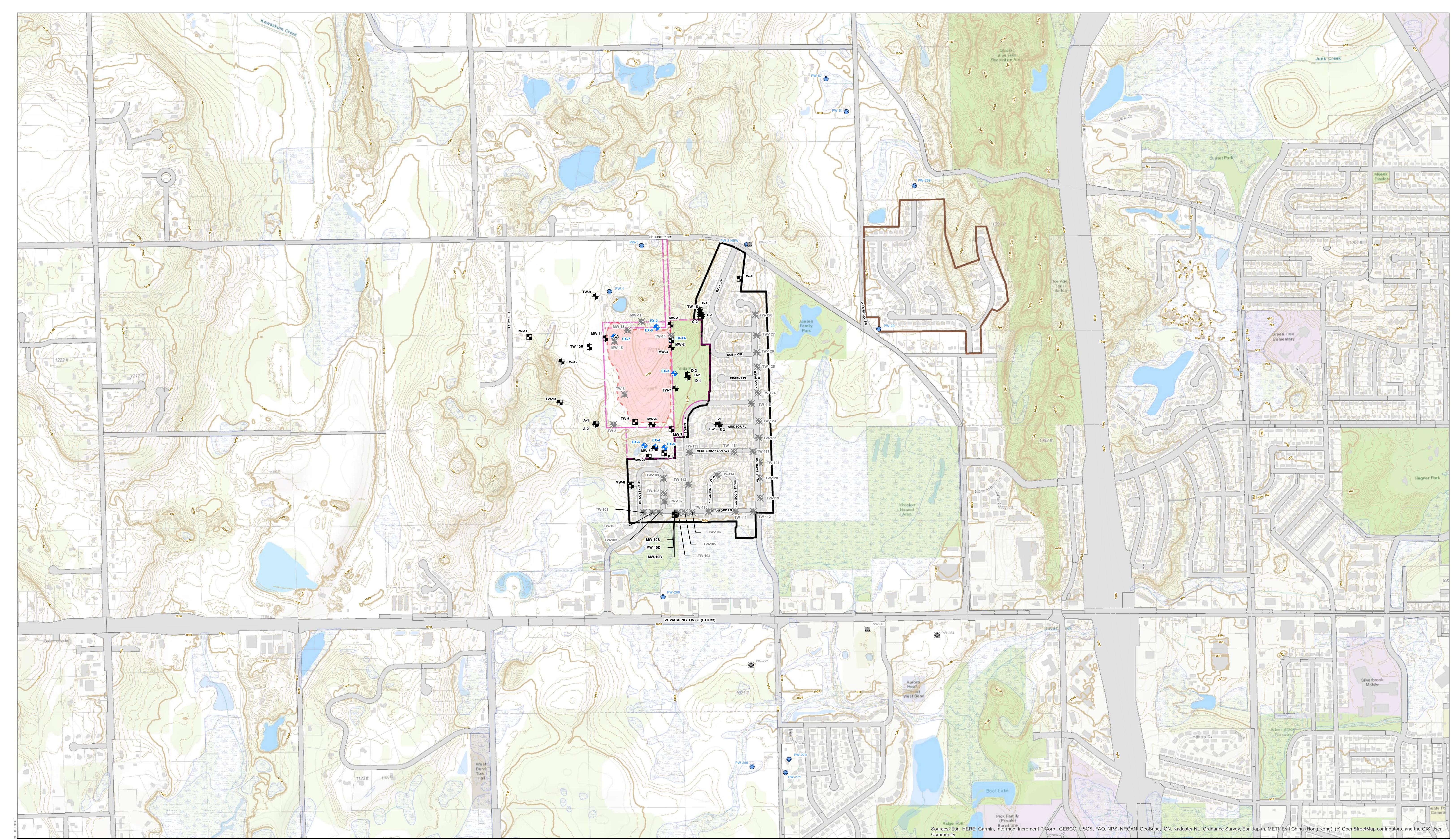
Enclosures:      Figure 1 – Site Features  
                        Table 1 – Comparison of Water VOC Detections (PDB vs Bailer)  
                        Table 2 – Landfill Groundwater Monitoring Program  
                        Appendix A – Laboratory Analytical Report (PDB)  
                        Appendix B – Laboratory Analytical Report (Bailer)

Reference:

United States Geological Survey (USGS). January 2023. Use of Passive Diffusion Samplers for Monitoring Volatile Organic Compounds in Groundwater (January 2023) in cooperation with the New Hampshire Department of Environmental Services [ USGS, January 2023; Fact Sheet Publication 088-00]. Currently available online: <https://pubs.usgs.gov/fs/fs-088-00/>

## Figures

Figure 1 Site Features



AECOM Milwaukee Office  
1555 River Center Dr  
Milwaukee WI

NOTE:  
Approximate well locations were added from historical maps for abandoned wells: TW-2, MW-11, MW-13, MW15 and PW218.  
Approximate locations were added from historical maps for the existing wells: EX-6, C-1 and P-15.  
The following locations were not added to the map: PW-23, PW-261 and TW-14.

Sources: Esri, HERE, Garmin, Intermap, Increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User

Project No.  
60485031

Date:  
March 2022

FIGURE 1

**SITE FEATURES MAP**  
Schuster Drive Landfill, SW License # 0224  
3995 Schuster Drive  
West Bend, WI

**AECOM**

## Tables

- Table 1      Summary of Groundwater Detects  
Table 2      Annual Groundwater Monitoring Program

**TABLE 1**  
**Summary of Groundwater Detects**  
**Groundwater Sample Methodology Comparison Bailer vs. Passive Diffusion Bag (PDB)**  
**Schuster Drive Landfill - WDNR SW License #0224), FID#267059320**  
**Sample Collection Date: May 5, 2023**

Analyte	NR140 ES	<i>NR140 PAL</i>	MW-10D		TW-15		Trip Blank
			Bailer	PDB	Bailer	PDB	
1,1-Dichloroethane	850	85	0.99 J	0.98 J	<0.30	<0.30	<0.30
cis-1,2-Dichloroethene	70	7	<u>34.7</u>	<u>34.3</u>	<0.47	<0.47	<0.47
trans-1,2-Dichloroethene	100	20	0.96 J	1.1	<0.53	<0.53	<0.53
Tetrachloroethene	5	0.5	<0.41	<0.41	<u>3.3</u>	<u>2.6</u>	<0.41
1,1,1-Trichloroethane	200	40	1.2	1.1	0.34 J	<0.30	<0.30
Trichloroethene	5	0.5	<b>48.8</b>	<b>46.9</b>	<u>1.6</u>	<u>1.7</u>	<0.32

Notes:

No Standard = --

No Analysis = NA

Bold value exceeds NR-140 Enforcement Standard (ES)

Italicized and underlined value exceeds NR-140 Preventive Action Limit (PAL)

**TABLE 2**  
**Groundwater Monitoring Program**  
**Schuster Drive Landfill - WDNR SW License #0224), FID#267059320**

City	WDNR	Well	Type	Annual	Monthly	VOC					
Well No.	Well No.	Well Owner	Year Const.	Depth (ft)	Geologic Unit	of Well ext	Water Level	Water Level	VOC Quarterly	Semi-Annual	VOC Annual
EX01A	525	City	1991	162	S&G	ext		X			X
EX02	526	City	1992	156	S&G	ext		X			X
EX03	527	City	1992	111	S&G/Clay	ext		X			X
EX04	528	City	1992	66	S&G	ext			X		
EX05	529	City	1992	69	S&G	ext			X		
EX06	530	City	1992	58	S&G/Clay	ext		X			X
EX07	531	City	1997	140	S&G	ext			X		
EX08	534	City	2000	153	S&G	ext			X		
GEW26		City	1997	40	Fill	ext			X		
TW6		City	?	?	S&G	pz		X <sup>2</sup>			X <sup>2</sup>
TW7	206	City	1976	90	S&G/Clay	pz		X <sup>2</sup>			X <sup>2</sup>
TW9	218	City	1979	118	S&G	pz	X <sup>2</sup>				X <sup>2</sup>
TW10R	239	City	1993	100	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
TW11	230	City	1979	80	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
TW12	231	City	1979	80	S&G	wt	X <sup>2</sup>				X <sup>2</sup>
TW13	231	City	1979	35	S&G	wt	X <sup>2</sup>				X <sup>2</sup>
TW15	226	City	1984	81	S&G	wt		X <sup>2</sup>	X <sup>2</sup>		X <sup>2</sup>
TW16	227	City	1984	54	S&G	wt	X <sup>2</sup>				X <sup>2</sup>
A1	244	City	1988	76	S&G	wt/pz	X <sup>2</sup>				X <sup>2</sup>
A2	245	City	1988	212	Rock	pz	X <sup>2</sup>				X <sup>2</sup>
C2	247	City	1988	245	Rock	pz	X <sup>2</sup>				X <sup>2</sup>
D1	240	City	1988	87	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
D2	241	City	1988		Till	pz		X <sup>2</sup>			
D3	242	City	1988	235	Rock	pz	X <sup>2</sup>				X <sup>2</sup>
E1	248	City	1988	57	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
E2	249	City	1988		Till	pz		X <sup>2</sup>			
E3	250	City	1988	238	Rock	pz	X <sup>2</sup>				X <sup>2</sup>
F1	243	City	1988	38	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
MW1	252	City	1991	145	S&G	wt/pz		X <sup>2</sup>			X <sup>2</sup>
MW2	253	City	1991	152	S&G	pz		X <sup>2</sup>			X <sup>2</sup>
MW3	254	City	1991	148	S&G	pz		X <sup>2</sup>			X <sup>2</sup>
MW4	255	City	1991	107	S&G/Clay	wt/pz		X <sup>2</sup>			X <sup>2</sup>
MW5	256	City	1991	43	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
MW6	257	City	1991	43	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
MW7	258	City	1992	81	S&G	pz		X <sup>2</sup>			X <sup>2</sup>
MW8	259	City	1992	32	S&G	pz		X <sup>2</sup>			X <sup>2</sup>
MW10S	262	City	1992	15	S&G	wt	X <sup>2</sup>				X <sup>2</sup>
MW10D	263	City	1992	76	S&G	pz	X <sup>2</sup>				X <sup>2</sup>
MW10B	264	City	1993	131	Rock	pz	X <sup>2</sup>				X <sup>2</sup>
MW11	265	City	1993	138	S&G	wt		X <sup>2</sup>	X <sup>2</sup>		
MW13	--	City	1997	116	S&G	wt	Abandon				
MW14	532	City	1997	97	S&G	wt		X <sup>2</sup>			X <sup>2</sup>
MW15	533	City	1997	110	S&G	wt	Abandon				
PW1	211	Abel	1970	180	Rock	pw			X		
PW3	213	Abel	1970	220	Rock	pw			X		
PW8 new	221	J. Schroeder	1984	198	Rock	pw					X
PW8 old	380	J. Schroeder	?	?	S&G	pw					X
PW51	238	M. Matenaer	1978	75	Rock	pw					X
PW57	378	N. Matenaer				pw					X
PW218	272	F. Pietschmann	1964	69	S&G	pw					X
PW259	287	T. Martin	?	?	Rock ?	pw					X
PW20	234	Yogerst	1959	?	Rock	pw					X
PW260	277	Parts Centre	?	?	Rock ?	pw					X
PW221	281	Devenport	1960	270	Rock	pw					X
PW269	283	R. Gerner	?	?	?	pw				X	
PW270	282	C. Schwanz	?	?	?	pw				X	
PW271	284	B. Voss	?	?	?	pw					X
PW264	268	Eulert Acnt.	?	?	?	pw					X
						15 pz					
TOTALS						16 wt 3 wt/pz 15 pw	12 mw	23 mw	6 ext 5 mw 2 pw	2 pw	3 ext 26 mw 11 pw

NOTES:

1. VOC = volatile organic compound.
2. ? = indicates unknown at this time.
3. S&G = indicates and well installed in the sand and gravel aquifer.
4. S&G/Clay = indicates that the base of the well is near the contact surface between sand and gravel and clay till.
5. pz = indicates piezometer well (static water level is typically greater than 1-3 feet above well screen).
6. wt = indicates water table well.
7. wt/pz = indicates static water level may fluctuate above or below top of well screen.
8. pw = indicates private well.
9. ext = indicates extraction well.
10. mw = indicates monitoring well and includes A's, C's, D's, E's, F's, TW's, and MW's.
11. X<sup>2</sup> = indicates groundwater sampling method of passive diffusion bag.

Schuster Drive Landfill  
West Bend, WI

Project Reference: BRRTS# 02-67-584461  
Project Number: 60485031

## Appendix A Laboratory Analytical Report (PDB)

May 15, 2023

Tory Schultz  
AECOM  
1555 North Rivercenter Drive  
Suite 214  
Milwaukee, WI 53212

RE: Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261811

Dear Tory Schultz:

Enclosed are the analytical results for sample(s) received by the laboratory on May 06, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Leo B. Linnemanstons, P.G., AECOM, Inc  
Keith Nielsen, AECOM



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261811

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky UST Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
New York Certification #: 12064  
North Dakota Certification #: R-150

South Carolina Certification #: 83006001  
Texas Certification #: T104704529-21-8  
Virginia VELAP Certification ID: 11873  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444  
USDA Soil Permit #: P330-21-00008  
Federal Fish & Wildlife Permit #: 51774A

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261811

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40261811001	TRIP BLANK (PDB)	Water	05/05/23 12:00	05/06/23 09:05
40261811002	TW-15 (PDB)	Water	05/05/23 13:45	05/06/23 09:05
40261811003	MW-10D (PDB)	Water	05/05/23 12:30	05/06/23 09:05

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## SAMPLE ANALYTE COUNT

Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261811

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40261811001	TRIP BLANK (PDB)	EPA 8260	CXJ	45	PASI-G
40261811002	TW-15 (PDB)	EPA 8260	CXJ	65	PASI-G
40261811003	MW-10D (PDB)	EPA 8260	CXJ	45	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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## SUMMARY OF DETECTION

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261811

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40261811002</b>	<b>TW-15 (PDB)</b>					
EPA 8260	Tetrachloroethene	2.6	ug/L	1.0	05/11/23 12:49	
EPA 8260	Trichloroethene	1.7	ug/L	1.0	05/11/23 12:49	
<b>40261811003</b>	<b>MW-10D (PDB)</b>					
EPA 8260	1,1,1-Trichloroethane	1.1	ug/L	1.0	05/11/23 18:02	
EPA 8260	1,1-Dichloroethane	0.98J	ug/L	1.0	05/11/23 18:02	
EPA 8260	Trichloroethene	46.9	ug/L	1.0	05/11/23 18:02	
EPA 8260	cis-1,2-Dichloroethene	34.3	ug/L	1.0	05/11/23 18:02	
EPA 8260	trans-1,2-Dichloroethene	1.1	ug/L	1.0	05/11/23 18:02	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

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**Sample: TRIP BLANK (PDB)**      **Lab ID: 40261811001**      Collected: 05/05/23 12:00      Received: 05/06/23 09:05      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/11/23 12:29	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/11/23 12:29	79-00-5	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/11/23 12:29	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/11/23 12:29	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/11/23 12:29	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/11/23 12:29	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 12:29	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/11/23 12:29	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/11/23 12:29	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/11/23 12:29	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/11/23 12:29	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/11/23 12:29	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/11/23 12:29	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/11/23 12:29	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 12:29	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/11/23 12:29	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/11/23 12:29	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/11/23 12:29	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/11/23 12:29	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/11/23 12:29	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/11/23 12:29	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/11/23 12:29	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/11/23 12:29	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/11/23 12:29	124-48-1	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/11/23 12:29	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/11/23 12:29	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 12:29	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/11/23 12:29	1634-04-4	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/11/23 12:29	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/11/23 12:29	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/11/23 12:29	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/11/23 12:29	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/11/23 12:29	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/11/23 12:29	108-88-3	
Trichloroethene	<0.32	ug/L	1.0	0.32	1		05/11/23 12:29	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 12:29	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/11/23 12:29	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/11/23 12:29	1330-20-7	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/11/23 12:29	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/11/23 12:29	10061-01-5	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/11/23 12:29	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/11/23 12:29	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	110	%	70-130		1		05/11/23 12:29	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	70-130		1		05/11/23 12:29	2199-69-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261811

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Sample: TRIP BLANK (PDB)      Lab ID: 40261811001      Collected: 05/05/23 12:00      Received: 05/06/23 09:05      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
<b>Surrogates</b>									
Toluene-d8 (S)	101	%	70-130		1		05/11/23 12:29	2037-26-5	

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

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**Sample: TW-15 (PDB)**      **Lab ID: 40261811002**      Collected: 05/05/23 13:45      Received: 05/06/23 09:05      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
Benzene	<0.30	ug/L	1.0	0.30	1		05/11/23 12:49	71-43-2	
Bromobenzene	<0.36	ug/L	1.0	0.36	1		05/11/23 12:49	108-86-1	
Bromo(chloromethane)	<0.36	ug/L	1.0	0.36	1		05/11/23 12:49	74-97-5	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 12:49	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/11/23 12:49	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/11/23 12:49	74-83-9	
n-Butylbenzene	<0.86	ug/L	1.0	0.86	1		05/11/23 12:49	104-51-8	
sec-Butylbenzene	<0.42	ug/L	1.0	0.42	1		05/11/23 12:49	135-98-8	
tert-Butylbenzene	<0.59	ug/L	1.0	0.59	1		05/11/23 12:49	98-06-6	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/11/23 12:49	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/11/23 12:49	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/11/23 12:49	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/11/23 12:49	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/11/23 12:49	74-87-3	
2-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		05/11/23 12:49	95-49-8	
4-Chlorotoluene	<0.89	ug/L	5.0	0.89	1		05/11/23 12:49	106-43-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/11/23 12:49	96-12-8	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/11/23 12:49	124-48-1	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/11/23 12:49	106-93-4	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/11/23 12:49	74-95-3	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 12:49	95-50-1	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/11/23 12:49	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/11/23 12:49	106-46-7	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/11/23 12:49	75-71-8	
1,1-Dichloroethane	<0.30	ug/L	1.0	0.30	1		05/11/23 12:49	75-34-3	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/11/23 12:49	107-06-2	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/11/23 12:49	75-35-4	
cis-1,2-Dichloroethene	<0.47	ug/L	1.0	0.47	1		05/11/23 12:49	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/L	1.0	0.53	1		05/11/23 12:49	156-60-5	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/11/23 12:49	78-87-5	
1,3-Dichloropropane	<0.30	ug/L	1.0	0.30	1		05/11/23 12:49	142-28-9	
2,2-Dichloropropane	<0.42	ug/L	1.0	0.42	1		05/11/23 12:49	594-20-7	
1,1-Dichloropropene	<0.41	ug/L	1.0	0.41	1		05/11/23 12:49	563-58-6	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/11/23 12:49	10061-01-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/11/23 12:49	10061-02-6	
Diisopropyl ether	<1.1	ug/L	5.0	1.1	1		05/11/23 12:49	108-20-3	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 12:49	100-41-4	
Hexachloro-1,3-butadiene	<2.7	ug/L	5.0	2.7	1		05/11/23 12:49	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	5.0	1.0	1		05/11/23 12:49	98-82-8	
p-Isopropyltoluene	<1.0	ug/L	5.0	1.0	1		05/11/23 12:49	99-87-6	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/11/23 12:49	75-09-2	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/11/23 12:49	1634-04-4	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/11/23 12:49	91-20-3	
n-Propylbenzene	<0.35	ug/L	1.0	0.35	1		05/11/23 12:49	103-65-1	
Styrene	<0.36	ug/L	1.0	0.36	1		05/11/23 12:49	100-42-5	

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

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**Sample: TW-15 (PDB)**      **Lab ID: 40261811002**      Collected: 05/05/23 13:45      Received: 05/06/23 09:05      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
1,1,1,2-Tetrachloroethane	<0.36	ug/L	1.0	0.36	1		05/11/23 12:49	630-20-6	
1,1,2,2-Tetrachloroethane	<0.38	ug/L	1.0	0.38	1		05/11/23 12:49	79-34-5	
Tetrachloroethene	2.6	ug/L	1.0	0.41	1		05/11/23 12:49	127-18-4	
Toluene	<0.29	ug/L	1.0	0.29	1		05/11/23 12:49	108-88-3	
1,2,3-Trichlorobenzene	<1.0	ug/L	5.0	1.0	1		05/11/23 12:49	87-61-6	
1,2,4-Trichlorobenzene	<0.95	ug/L	5.0	0.95	1		05/11/23 12:49	120-82-1	
1,1,1-Trichloroethane	<0.30	ug/L	1.0	0.30	1		05/11/23 12:49	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/11/23 12:49	79-00-5	
Trichloroethene	1.7	ug/L	1.0	0.32	1		05/11/23 12:49	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 12:49	75-69-4	
1,2,3-Trichloropropane	<0.56	ug/L	1.0	0.56	1		05/11/23 12:49	96-18-4	
1,2,4-Trimethylbenzene	<0.45	ug/L	1.0	0.45	1		05/11/23 12:49	95-63-6	
1,3,5-Trimethylbenzene	<0.36	ug/L	1.0	0.36	1		05/11/23 12:49	108-67-8	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/11/23 12:49	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/11/23 12:49	1330-20-7	
m&p-Xylene	<0.70	ug/L	2.0	0.70	1		05/11/23 12:49	179601-23-1	
o-Xylene	<0.35	ug/L	1.0	0.35	1		05/11/23 12:49	95-47-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	108	%	70-130		1		05/11/23 12:49	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	70-130		1		05/11/23 12:49	2199-69-1	
Toluene-d8 (S)	101	%	70-130		1		05/11/23 12:49	2037-26-5	

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

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**Sample: MW-10D (PDB)**      **Lab ID: 40261811003**      Collected: 05/05/23 12:30      Received: 05/06/23 09:05      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	1.1	ug/L	1.0	0.30	1		05/11/23 18:02	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/11/23 18:02	79-00-5	
1,1-Dichloroethane	0.98J	ug/L	1.0	0.30	1		05/11/23 18:02	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/11/23 18:02	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/11/23 18:02	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/11/23 18:02	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 18:02	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/11/23 18:02	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/11/23 18:02	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/11/23 18:02	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/11/23 18:02	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/11/23 18:02	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/11/23 18:02	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/11/23 18:02	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 18:02	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/11/23 18:02	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/11/23 18:02	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/11/23 18:02	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/11/23 18:02	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/11/23 18:02	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/11/23 18:02	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/11/23 18:02	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/11/23 18:02	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/11/23 18:02	124-48-1	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/11/23 18:02	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/11/23 18:02	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 18:02	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/11/23 18:02	1634-04-4	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/11/23 18:02	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/11/23 18:02	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/11/23 18:02	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/11/23 18:02	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/11/23 18:02	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/11/23 18:02	108-88-3	
Trichloroethene	46.9	ug/L	1.0	0.32	1		05/11/23 18:02	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 18:02	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/11/23 18:02	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/11/23 18:02	1330-20-7	
cis-1,2-Dichloroethene	34.3	ug/L	1.0	0.47	1		05/11/23 18:02	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/11/23 18:02	10061-01-5	
trans-1,2-Dichloroethene	1.1	ug/L	1.0	0.53	1		05/11/23 18:02	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/11/23 18:02	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	107	%	70-130		1		05/11/23 18:02	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	70-130		1		05/11/23 18:02	2199-69-1	

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261811

Sample: MW-10D (PDB) Lab ID: 40261811003 Collected: 05/05/23 12:30 Received: 05/06/23 09:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
<b>Surrogates</b>									
Toluene-d8 (S)	101	%	70-130		1		05/11/23 18:02	2037-26-5	

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

QC Batch: 444339 Analysis Method: EPA 8260

QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40261811001, 40261811002, 40261811003

METHOD BLANK: 2550891 Matrix: Water

Associated Lab Samples: 40261811001, 40261811002, 40261811003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.36	1.0	05/11/23 09:33	
1,1,1-Trichloroethane	ug/L	<0.30	1.0	05/11/23 09:33	
1,1,2,2-Tetrachloroethane	ug/L	<0.38	1.0	05/11/23 09:33	
1,1,2-Trichloroethane	ug/L	<0.34	1.0	05/11/23 09:33	
1,1-Dichloroethane	ug/L	<0.30	1.0	05/11/23 09:33	
1,1-Dichloroethene	ug/L	<0.58	1.0	05/11/23 09:33	
1,1-Dichloropropene	ug/L	<0.41	1.0	05/11/23 09:33	
1,2,3-Trichlorobenzene	ug/L	<1.0	5.0	05/11/23 09:33	
1,2,3-Trichloropropane	ug/L	<0.56	1.0	05/11/23 09:33	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	05/11/23 09:33	
1,2,4-Trimethylbenzene	ug/L	<0.45	1.0	05/11/23 09:33	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	5.0	05/11/23 09:33	
1,2-Dibromoethane (EDB)	ug/L	<0.31	1.0	05/11/23 09:33	
1,2-Dichlorobenzene	ug/L	<0.33	1.0	05/11/23 09:33	
1,2-Dichloroethane	ug/L	<0.29	1.0	05/11/23 09:33	
1,2-Dichloropropane	ug/L	<0.45	1.0	05/11/23 09:33	
1,3,5-Trimethylbenzene	ug/L	<0.36	1.0	05/11/23 09:33	
1,3-Dichlorobenzene	ug/L	<0.35	1.0	05/11/23 09:33	
1,3-Dichloropropane	ug/L	<0.30	1.0	05/11/23 09:33	
1,4-Dichlorobenzene	ug/L	<0.89	1.0	05/11/23 09:33	
2,2-Dichloropropane	ug/L	<0.42	1.0	05/11/23 09:33	
2-Butanone (MEK)	ug/L	<6.5	25.0	05/11/23 09:33	
2-Chlorotoluene	ug/L	<0.89	5.0	05/11/23 09:33	
4-Chlorotoluene	ug/L	<0.89	5.0	05/11/23 09:33	
Acetone	ug/L	<8.6	25.0	05/11/23 09:33	
Benzene	ug/L	<0.30	1.0	05/11/23 09:33	
Bromobenzene	ug/L	<0.36	1.0	05/11/23 09:33	
Bromochloromethane	ug/L	<0.36	1.0	05/11/23 09:33	
Bromodichloromethane	ug/L	<0.42	1.0	05/11/23 09:33	
Bromoform	ug/L	<0.43	1.0	05/11/23 09:33	
Bromomethane	ug/L	<1.2	5.0	05/11/23 09:33	
Carbon disulfide	ug/L	<0.65	1.0	05/11/23 09:33	
Carbon tetrachloride	ug/L	<0.37	1.0	05/11/23 09:33	
Chlorobenzene	ug/L	<0.86	1.0	05/11/23 09:33	
Chloroethane	ug/L	<1.4	5.0	05/11/23 09:33	
Chloroform	ug/L	<0.50	5.0	05/11/23 09:33	
Chloromethane	ug/L	<1.6	5.0	05/11/23 09:33	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	05/11/23 09:33	
cis-1,3-Dichloropropene	ug/L	<0.24	1.0	05/11/23 09:33	
Dibromochloromethane	ug/L	<2.6	5.0	05/11/23 09:33	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

METHOD BLANK: 2550891

Matrix: Water

Associated Lab Samples: 40261811001, 40261811002, 40261811003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	<0.99	5.0	05/11/23 09:33	
Dichlorodifluoromethane	ug/L	<0.46	5.0	05/11/23 09:33	
Diisopropyl ether	ug/L	<1.1	5.0	05/11/23 09:33	
Ethylbenzene	ug/L	<0.33	1.0	05/11/23 09:33	
Hexachloro-1,3-butadiene	ug/L	<2.7	5.0	05/11/23 09:33	
Isopropylbenzene (Cumene)	ug/L	<1.0	5.0	05/11/23 09:33	
m&p-Xylene	ug/L	<0.70	2.0	05/11/23 09:33	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	05/11/23 09:33	
Methylene Chloride	ug/L	<0.32	5.0	05/11/23 09:33	
n-Butylbenzene	ug/L	<0.86	1.0	05/11/23 09:33	
n-Propylbenzene	ug/L	<0.35	1.0	05/11/23 09:33	
Naphthalene	ug/L	<1.9	5.0	05/11/23 09:33	
o-Xylene	ug/L	<0.35	1.0	05/11/23 09:33	
p-Isopropyltoluene	ug/L	<1.0	5.0	05/11/23 09:33	
sec-Butylbenzene	ug/L	<0.42	1.0	05/11/23 09:33	
Styrene	ug/L	<0.36	1.0	05/11/23 09:33	
tert-Butylbenzene	ug/L	<0.59	1.0	05/11/23 09:33	
Tetrachloroethene	ug/L	<0.41	1.0	05/11/23 09:33	
Tetrahydrofuran	ug/L	<2.4	25.0	05/11/23 09:33	
Toluene	ug/L	<0.29	1.0	05/11/23 09:33	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	05/11/23 09:33	
trans-1,3-Dichloropropene	ug/L	<0.27	1.0	05/11/23 09:33	
Trichloroethene	ug/L	<0.32	1.0	05/11/23 09:33	
Trichlorofluoromethane	ug/L	<0.42	1.0	05/11/23 09:33	
Vinyl chloride	ug/L	<0.17	1.0	05/11/23 09:33	
Xylene (Total)	ug/L	<1.0	3.0	05/11/23 09:33	
1,2-Dichlorobenzene-d4 (S)	%	98	70-130	05/11/23 09:33	
4-Bromofluorobenzene (S)	%	107	70-130	05/11/23 09:33	
Toluene-d8 (S)	%	101	70-130	05/11/23 09:33	

LABORATORY CONTROL SAMPLE: 2550892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.0	100	70-134	
1,1,2,2-Tetrachloroethane	ug/L	50	51.5	103	69-130	
1,1,2-Trichloroethane	ug/L	50	49.1	98	70-130	
1,1-Dichloroethane	ug/L	50	51.2	102	70-130	
1,1-Dichloroethene	ug/L	50	56.8	114	74-131	
1,2,4-Trichlorobenzene	ug/L	50	42.7	85	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	42.8	86	64-137	
1,2-Dibromoethane (EDB)	ug/L	50	45.9	92	70-130	
1,2-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,2-Dichloroethane	ug/L	50	49.7	99	70-137	
1,2-Dichloropropane	ug/L	50	49.4	99	80-121	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

**LABORATORY CONTROL SAMPLE: 2550892**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	50	49.4	99	70-130	
1,4-Dichlorobenzene	ug/L	50	48.5	97	70-130	
Benzene	ug/L	50	52.0	104	70-130	
Bromodichloromethane	ug/L	50	49.0	98	70-130	
Bromoform	ug/L	50	42.2	84	70-130	
Bromomethane	ug/L	50	56.3	113	21-147	
Carbon disulfide	ug/L	50	49.9	100	70-130	
Carbon tetrachloride	ug/L	50	48.1	96	80-146	
Chlorobenzene	ug/L	50	48.4	97	70-130	
Chloroethane	ug/L	50	63.7	127	52-165	
Chloroform	ug/L	50	51.0	102	80-123	
Chloromethane	ug/L	50	54.4	109	51-122	
cis-1,2-Dichloroethene	ug/L	50	47.9	96	70-130	
cis-1,3-Dichloropropene	ug/L	50	48.0	96	70-130	
Dibromochloromethane	ug/L	50	42.5	85	70-130	
Dichlorodifluoromethane	ug/L	50	43.4	87	25-121	
Ethylbenzene	ug/L	50	52.7	105	80-120	
Isopropylbenzene (Cumene)	ug/L	50	49.5	99	70-130	
m&p-Xylene	ug/L	100	98.9	99	70-130	
Methyl-tert-butyl ether	ug/L	50	52.0	104	70-130	
Methylene Chloride	ug/L	50	56.0	112	70-130	
o-Xylene	ug/L	50	50.2	100	70-130	
Styrene	ug/L	50	58.5	117	70-130	
Tetrachloroethene	ug/L	50	43.5	87	70-130	
Toluene	ug/L	50	49.7	99	80-120	
trans-1,2-Dichloroethene	ug/L	50	55.8	112	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.3	95	70-130	
Trichloroethene	ug/L	50	50.8	102	70-130	
Trichlorofluoromethane	ug/L	50	54.0	108	65-160	
Vinyl chloride	ug/L	50	58.4	117	63-134	
Xylene (Total)	ug/L	150	149	99	70-130	
1,2-Dichlorobenzene-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Toluene-d8 (S)	%			100	70-130	

**MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2552149 2552150**

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		40261811002	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
1,1,1-Trichloroethane	ug/L	<0.30	50	50	48.3	49.9	96	99	70-134	3	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.38	50	50	50.5	52.0	101	104	61-135	3	20		
1,1,2-Trichloroethane	ug/L	<0.34	50	50	47.5	48.8	95	98	70-130	3	20		
1,1-Dichloroethane	ug/L	<0.30	50	50	51.8	51.8	104	104	70-130	0	20		
1,1-Dichloroethene	ug/L	<0.58	50	50	55.0	56.1	110	112	71-130	2	20		
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	43.7	42.7	87	85	68-131	2	20		

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

Parameter	Units	40261811002		MS		MSD		2552150		% Rec	Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec						
1,2-Dibromo-3-chloropropane	ug/L	<2.4	50	50	42.4	43.2	85	86	51-141	2	20			
1,2-Dibromoethane (EDB)	ug/L	<0.31	50	50	45.1	45.9	90	92	70-130	2	20			
1,2-Dichlorobenzene	ug/L	<0.33	50	50	49.3	49.3	99	99	70-130	0	20			
1,2-Dichloroethane	ug/L	<0.29	50	50	47.7	52.7	95	105	70-137	10	20			
1,2-Dichloropropane	ug/L	<0.45	50	50	48.1	50.1	96	100	80-121	4	20			
1,3-Dichlorobenzene	ug/L	<0.35	50	50	49.5	50.0	99	100	70-130	1	20			
1,4-Dichlorobenzene	ug/L	<0.89	50	50	47.6	47.7	95	95	70-130	0	20			
Benzene	ug/L	<0.30	50	50	51.0	52.1	102	104	70-130	2	20			
Bromodichloromethane	ug/L	<0.42	50	50	48.0	49.0	96	98	70-130	2	20			
Bromoform	ug/L	<0.43	50	50	40.1	41.1	80	82	70-133	2	20			
Bromomethane	ug/L	<1.2	50	50	59.3	60.3	119	121	21-149	2	22			
Carbon disulfide	ug/L	<0.65	50	50	48.1	49.6	96	99	70-130	3	20			
Carbon tetrachloride	ug/L	<0.37	50	50	46.9	47.9	94	96	80-146	2	20			
Chlorobenzene	ug/L	<0.86	50	50	47.2	48.1	94	96	70-130	2	20			
Chloroethane	ug/L	<1.4	50	50	57.6	58.6	115	117	52-165	2	20			
Chloroform	ug/L	<0.50	50	50	49.9	50.4	100	101	80-123	1	20			
Chloromethane	ug/L	<1.6	50	50	50.9	53.0	102	106	42-125	4	20			
cis-1,2-Dichloroethene	ug/L	<0.47	50	50	48.0	48.2	96	96	70-130	0	20			
cis-1,3-Dichloropropene	ug/L	<0.24	50	50	47.6	48.8	95	98	70-130	2	20			
Dibromochloromethane	ug/L	<2.6	50	50	41.6	42.8	83	86	70-130	3	20			
Dichlorodifluoromethane	ug/L	<0.46	50	50	43.2	43.8	86	88	25-121	1	20			
Ethylbenzene	ug/L	<0.33	50	50	51.2	51.8	102	104	80-121	1	20			
Isopropylbenzene (Cumene)	ug/L	<1.0	50	50	48.4	48.7	97	97	70-130	1	20			
m&p-Xylene	ug/L	<0.70	100	100	96.7	99.3	97	99	70-130	3	20			
Methyl-tert-butyl ether	ug/L	<1.1	50	50	50.4	52.1	101	104	70-130	3	20			
Methylene Chloride	ug/L	<0.32	50	50	55.8	57.3	112	115	70-130	3	20			
o-Xylene	ug/L	<0.35	50	50	48.0	49.3	96	99	70-130	3	20			
Styrene	ug/L	<0.36	50	50	57.0	58.4	114	117	70-132	3	20			
Tetrachloroethene	ug/L	2.6	50	50	44.8	47.0	84	89	70-130	5	20			
Toluene	ug/L	<0.29	50	50	48.1	48.8	96	98	80-120	1	20			
trans-1,2-Dichloroethene	ug/L	<0.53	50	50	54.3	55.1	109	110	70-130	2	20			
trans-1,3-Dichloropropene	ug/L	<0.27	50	50	45.7	45.9	91	92	70-130	0	20			
Trichloroethene	ug/L	1.7	50	50	52.2	52.5	101	102	70-130	1	20			
Trichlorofluoromethane	ug/L	<0.42	50	50	52.8	54.1	106	108	65-160	2	20			
Vinyl chloride	ug/L	<0.17	50	50	57.1	57.0	114	114	60-137	0	20			
Xylene (Total)	ug/L	<1.0	150	150	145	149	96	99	70-130	3	20			
1,2-Dichlorobenzene-d4 (S)	%						99	98	70-130					
4-Bromofluorobenzene (S)	%						104	106	70-130					
Toluene-d8 (S)	%						100	100	70-130					

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## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261811

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261811

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40261811001	TRIP BLANK (PDB)	EPA 8260	444339		
40261811002	TW-15 (PDB)	EPA 8260	444339		
40261811003	MW-10D (PDB)	EPA 8260	444339		

## REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

402c1 811

**Section A**  
Required Client Information

Company: AECOM - Milw	Report To: <u>Tory Schulte</u>	Attention: <u>USAPIMAGING@ACOM.COM</u>
Address 1555 N. River Center Dr., Suite 214	Copy To:	Company Name: <u>Same</u>
Milwaukee, WI 53212		Address: <u>Same</u>
Email To: <u>tory.schulte@acom.com</u>	Purchase Order No:	Pace Quote Reference
Phone <u>414.690.8405</u> Fax <u>414.690.8405</u>	Project Name: <u>Schuster Drive</u>	Pace Project Manager Chns Hyska
Requested Due Date/TAT: Standard	Project Number: <u>60485031</u>	Pace Profile #:

**Section D** Required Client Information

**SAMPLE ID**  
One Character per box  
(A-Z, 0-9 / .)  
Samples IDs MUST BE UNIQUE

Valid Matrix Codes	
MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOL/SOLID	SL
OIL	OL
WIFE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	MATRIX CODE	SAMPLE TYPE G+GRAB C-COMP	COLLECTED			SAMPLE TEMP AT COLLECTION	#OF CONTAINERS	Preservatives						Other	Requested Analyses	Pace Project Number Lab I.D.
			COMPOSITE START		COMPOSITE END/GRAB											
			DATE	TIME	DATE			TIME	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> SO <sub>3</sub>			
1	WT	G		05/05/23	1200		2							2	001	
2	WT	1			1345		3							3	002	
3	WT	↓		↓	1230		3							3	003	
4	WT															
5	WT															
6	WT															
7	WT															
8	WT															
9	WT															
10	WT															
11	WT															
12	WT															

KSN  
05/05/23

Additional Comments:

Total Metal

Dissolved Metals / Cd, Hg, Pb, Zn

\* HOLD ANALYSIS of  
item "Trip Blank (PDB)"

for Tory Schulte approval \*

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<u>AS</u>	<u>RENO</u>	<u>05/05/1900</u>				
<u>CS Logistics</u>	<u>9/16/23 0905</u>		<u>Angel R. Dill Poco. 5/6/23 090500</u>			

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER	<u>Keith Niclson</u>
SIGNATURE of SAMPLER	<u>Keith Niclson</u>
	DATE Signed (MM / DD / YY)

Temp in °C  
Received on  
Ice  
Plated  
Sealed  
Cooler  
of  
Samples Intact

Effective Date: 8/16/2022

## Sample Preservation Receipt Form

Project # 402601811

 Yes  No  N/A

Client Name: Acum

All containers needing preservation have been checked and noted below:

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/  
Time:

Pace Lab #	Glass					Plastic					Vials					Jars			General			VOA Vials (>6mm) *											
	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP2S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2	H2SO4 pH ≤2	NaOH+Zn Acet pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001																													2.5 / 5				
002																													2.5 / 5				
003																													2.5 / 5				
004																													2.5 / 5				
005																													2.5 / 5				
006																													2.5 / 5				
007																													2.5 / 5				
008																													2.5 / 5				
009																													2.5 / 5				
010																													2.5 / 5				
011																													2.5 / 5				
012																													2.5 / 5				
013																													2.5 / 5				
014																													2.5 / 5				
015																													2.5 / 5				
016																													2.5 / 5				
017																													2.5 / 5				
018																													2.5 / 5				
019																													2.5 / 5				
020																													2.5 / 5				

Exceptions to preservation check: VOA Coliform, TOC, TOX, TOH, O&amp;G, WI DRO, Phenolics, Other:

Headspace in VOA Vials (>6mm) :  Yes  No  N/A

\*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP2S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

## Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: AECOMCourier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco Client  Pace Other: \_\_\_\_\_

WO# : 40261811



40261811

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noCustody Seal on Samples Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  OtherThermometer Used SR - 129 Type of Ice: Wet Blue Dry None  Meltwater Only

Cooler Temperature Uncorr: 0,0 /Corr: 0,0

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 5/6/23 /Initials: DRG

Labeled By Initials: SG

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - DI VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No	5. Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Correct Type: <u>Pace Green Bay</u> <u>Pace IR</u> , Non-Pace		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: <u>W</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Trip Blank Present: <u>5/6/23</u> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.	
Trip Blank Custody Seals Present <u>DRG</u> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):		

## Client Notification/ Resolution:

If checked, see attached form for additional comments 

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log!

Page 2 of 2

Schuster Drive Landfill  
West Bend, WI

Project Reference: BRRTS# 02-67-584461  
Project Number: 60485031

## Appendix B Laboratory Analytical Report (Bailer)

May 15, 2023

Tory Schultz  
AECOM  
1555 North Rivercenter Drive  
Suite 214  
Milwaukee, WI 53212

RE: Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261810

Dear Tory Schultz:

Enclosed are the analytical results for sample(s) received by the laboratory on May 06, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska  
christopher.hyska@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Leo B. Linnemanstons, P.G., AECOM, Inc  
Keith Nielsen, AECOM



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261810

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### **Pace Analytical Services Green Bay**

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky UST Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334  
New York Certification #: 12064  
North Dakota Certification #: R-150

South Carolina Certification #: 83006001  
Texas Certification #: T104704529-21-8  
Virginia VELAP Certification ID: 11873  
Wisconsin Certification #: 405132750  
Wisconsin DATCP Certification #: 105-444  
USDA Soil Permit #: P330-21-00008  
Federal Fish & Wildlife Permit #: 51774A

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261810

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40261810001	TRIP BLANK (BAILER)	Water	05/05/23 12:00	05/06/23 09:05
40261810002	TW-15 (BAILER)	Water	05/05/23 14:30	05/06/23 09:05
40261810003	MW-10D (BAILER)	Water	05/05/23 13:30	05/06/23 09:05

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## SAMPLE ANALYTE COUNT

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261810

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40261810002	TW-15 (BAILER)	EPA 8260	CXJ	45	PASI-G
40261810003	MW-10D (BAILER)	EPA 8260	CXJ	45	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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## SUMMARY OF DETECTION

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261810

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40261810002</b>	<b>TW-15 (BAILER)</b>					
EPA 8260	1,1,1-Trichloroethane	0.34J	ug/L	1.0	05/11/23 13:08	
EPA 8260	Tetrachloroethene	3.3	ug/L	1.0	05/11/23 13:08	
EPA 8260	Trichloroethene	1.6	ug/L	1.0	05/11/23 13:08	
<b>40261810003</b>	<b>MW-10D (BAILER)</b>					
EPA 8260	1,1,1-Trichloroethane	1.2	ug/L	1.0	05/11/23 17:43	
EPA 8260	1,1-Dichloroethane	0.99J	ug/L	1.0	05/11/23 17:43	
EPA 8260	Trichloroethene	48.8	ug/L	1.0	05/11/23 17:43	
EPA 8260	cis-1,2-Dichloroethene	34.7	ug/L	1.0	05/11/23 17:43	
EPA 8260	trans-1,2-Dichloroethene	0.96J	ug/L	1.0	05/11/23 17:43	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261810

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**Sample: TW-15 (BAILER)**      **Lab ID: 40261810002**      Collected: 05/05/23 14:30      Received: 05/06/23 09:05      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	<b>0.34J</b>	ug/L	1.0	0.30	1		05/11/23 13:08	71-55-6	
1,1,2-Trichloroethane	<b>&lt;0.34</b>	ug/L	1.0	0.34	1		05/11/23 13:08	79-00-5	
1,1-Dichloroethane	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		05/11/23 13:08	75-34-3	
1,1-Dichloroethene	<b>&lt;0.58</b>	ug/L	1.0	0.58	1		05/11/23 13:08	75-35-4	
1,2-Dibromo-3-chloropropane	<b>&lt;2.4</b>	ug/L	5.0	2.4	1		05/11/23 13:08	96-12-8	
1,2-Dibromoethane (EDB)	<b>&lt;0.31</b>	ug/L	1.0	0.31	1		05/11/23 13:08	106-93-4	
1,2-Dichlorobenzene	<b>&lt;0.33</b>	ug/L	1.0	0.33	1		05/11/23 13:08	95-50-1	
1,2-Dichloroethane	<b>&lt;0.29</b>	ug/L	1.0	0.29	1		05/11/23 13:08	107-06-2	
1,2-Dichloropropane	<b>&lt;0.45</b>	ug/L	1.0	0.45	1		05/11/23 13:08	78-87-5	
1,3-Dichlorobenzene	<b>&lt;0.35</b>	ug/L	1.0	0.35	1		05/11/23 13:08	541-73-1	
1,4-Dichlorobenzene	<b>&lt;0.89</b>	ug/L	1.0	0.89	1		05/11/23 13:08	106-46-7	
2-Butanone (MEK)	<b>&lt;6.5</b>	ug/L	25.0	6.5	1		05/11/23 13:08	78-93-3	
Acetone	<b>&lt;8.6</b>	ug/L	25.0	8.6	1		05/11/23 13:08	67-64-1	
Benzene	<b>&lt;0.30</b>	ug/L	1.0	0.30	1		05/11/23 13:08	71-43-2	
Bromodichloromethane	<b>&lt;0.42</b>	ug/L	1.0	0.42	1		05/11/23 13:08	75-27-4	
Bromoform	<b>&lt;0.43</b>	ug/L	1.0	0.43	1		05/11/23 13:08	75-25-2	
Bromomethane	<b>&lt;1.2</b>	ug/L	5.0	1.2	1		05/11/23 13:08	74-83-9	
Carbon disulfide	<b>&lt;0.65</b>	ug/L	1.0	0.65	1		05/11/23 13:08	75-15-0	
Carbon tetrachloride	<b>&lt;0.37</b>	ug/L	1.0	0.37	1		05/11/23 13:08	56-23-5	
Chlorobenzene	<b>&lt;0.86</b>	ug/L	1.0	0.86	1		05/11/23 13:08	108-90-7	
Chloroethane	<b>&lt;1.4</b>	ug/L	5.0	1.4	1		05/11/23 13:08	75-00-3	
Chloroform	<b>&lt;0.50</b>	ug/L	5.0	0.50	1		05/11/23 13:08	67-66-3	
Chloromethane	<b>&lt;1.6</b>	ug/L	5.0	1.6	1		05/11/23 13:08	74-87-3	
Dibromochloromethane	<b>&lt;2.6</b>	ug/L	5.0	2.6	1		05/11/23 13:08	124-48-1	
Dibromomethane	<b>&lt;0.99</b>	ug/L	5.0	0.99	1		05/11/23 13:08	74-95-3	
Dichlorodifluoromethane	<b>&lt;0.46</b>	ug/L	5.0	0.46	1		05/11/23 13:08	75-71-8	
Ethylbenzene	<b>&lt;0.33</b>	ug/L	1.0	0.33	1		05/11/23 13:08	100-41-4	
Methyl-tert-butyl ether	<b>&lt;1.1</b>	ug/L	5.0	1.1	1		05/11/23 13:08	1634-04-4	
Methylene Chloride	<b>&lt;0.32</b>	ug/L	5.0	0.32	1		05/11/23 13:08	75-09-2	
Naphthalene	<b>&lt;1.9</b>	ug/L	5.0	1.9	1		05/11/23 13:08	91-20-3	
Styrene	<b>&lt;0.36</b>	ug/L	1.0	0.36	1		05/11/23 13:08	100-42-5	
Tetrachloroethene	<b>3.3</b>	ug/L	1.0	0.41	1		05/11/23 13:08	127-18-4	
Tetrahydrofuran	<b>&lt;2.4</b>	ug/L	25.0	2.4	1		05/11/23 13:08	109-99-9	
Toluene	<b>&lt;0.29</b>	ug/L	1.0	0.29	1		05/11/23 13:08	108-88-3	
Trichloroethene	<b>1.6</b>	ug/L	1.0	0.32	1		05/11/23 13:08	79-01-6	
Trichlorofluoromethane	<b>&lt;0.42</b>	ug/L	1.0	0.42	1		05/11/23 13:08	75-69-4	
Vinyl chloride	<b>&lt;0.17</b>	ug/L	1.0	0.17	1		05/11/23 13:08	75-01-4	
Xylene (Total)	<b>&lt;1.0</b>	ug/L	3.0	1.0	1		05/11/23 13:08	1330-20-7	
cis-1,2-Dichloroethene	<b>&lt;0.47</b>	ug/L	1.0	0.47	1		05/11/23 13:08	156-59-2	
cis-1,3-Dichloropropene	<b>&lt;0.24</b>	ug/L	1.0	0.24	1		05/11/23 13:08	10061-01-5	
trans-1,2-Dichloroethene	<b>&lt;0.53</b>	ug/L	1.0	0.53	1		05/11/23 13:08	156-60-5	
trans-1,3-Dichloropropene	<b>&lt;0.27</b>	ug/L	1.0	0.27	1		05/11/23 13:08	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	109	%	70-130		1		05/11/23 13:08	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	70-130		1		05/11/23 13:08	2199-69-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261810

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Sample: TW-15 (BAILER)      Lab ID: 40261810002      Collected: 05/05/23 14:30      Received: 05/06/23 09:05      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
<b>Surrogates</b> Toluene-d8 (S)	100	%	70-130		1		05/11/23 13:08	2037-26-5	

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261810

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**Sample: MW-10D (BAILER)**      **Lab ID: 40261810003**      Collected: 05/05/23 13:30      Received: 05/06/23 09:05      Matrix: Water

---

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
	Pace Analytical Services - Green Bay								
1,1,1-Trichloroethane	1.2	ug/L	1.0	0.30	1		05/11/23 17:43	71-55-6	
1,1,2-Trichloroethane	<0.34	ug/L	1.0	0.34	1		05/11/23 17:43	79-00-5	
1,1-Dichloroethane	0.99J	ug/L	1.0	0.30	1		05/11/23 17:43	75-34-3	
1,1-Dichloroethene	<0.58	ug/L	1.0	0.58	1		05/11/23 17:43	75-35-4	
1,2-Dibromo-3-chloropropane	<2.4	ug/L	5.0	2.4	1		05/11/23 17:43	96-12-8	
1,2-Dibromoethane (EDB)	<0.31	ug/L	1.0	0.31	1		05/11/23 17:43	106-93-4	
1,2-Dichlorobenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 17:43	95-50-1	
1,2-Dichloroethane	<0.29	ug/L	1.0	0.29	1		05/11/23 17:43	107-06-2	
1,2-Dichloropropane	<0.45	ug/L	1.0	0.45	1		05/11/23 17:43	78-87-5	
1,3-Dichlorobenzene	<0.35	ug/L	1.0	0.35	1		05/11/23 17:43	541-73-1	
1,4-Dichlorobenzene	<0.89	ug/L	1.0	0.89	1		05/11/23 17:43	106-46-7	
2-Butanone (MEK)	<6.5	ug/L	25.0	6.5	1		05/11/23 17:43	78-93-3	
Acetone	<8.6	ug/L	25.0	8.6	1		05/11/23 17:43	67-64-1	
Benzene	<0.30	ug/L	1.0	0.30	1		05/11/23 17:43	71-43-2	
Bromodichloromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 17:43	75-27-4	
Bromoform	<0.43	ug/L	1.0	0.43	1		05/11/23 17:43	75-25-2	
Bromomethane	<1.2	ug/L	5.0	1.2	1		05/11/23 17:43	74-83-9	
Carbon disulfide	<0.65	ug/L	1.0	0.65	1		05/11/23 17:43	75-15-0	
Carbon tetrachloride	<0.37	ug/L	1.0	0.37	1		05/11/23 17:43	56-23-5	
Chlorobenzene	<0.86	ug/L	1.0	0.86	1		05/11/23 17:43	108-90-7	
Chloroethane	<1.4	ug/L	5.0	1.4	1		05/11/23 17:43	75-00-3	
Chloroform	<0.50	ug/L	5.0	0.50	1		05/11/23 17:43	67-66-3	
Chloromethane	<1.6	ug/L	5.0	1.6	1		05/11/23 17:43	74-87-3	
Dibromochloromethane	<2.6	ug/L	5.0	2.6	1		05/11/23 17:43	124-48-1	
Dibromomethane	<0.99	ug/L	5.0	0.99	1		05/11/23 17:43	74-95-3	
Dichlorodifluoromethane	<0.46	ug/L	5.0	0.46	1		05/11/23 17:43	75-71-8	
Ethylbenzene	<0.33	ug/L	1.0	0.33	1		05/11/23 17:43	100-41-4	
Methyl-tert-butyl ether	<1.1	ug/L	5.0	1.1	1		05/11/23 17:43	1634-04-4	
Methylene Chloride	<0.32	ug/L	5.0	0.32	1		05/11/23 17:43	75-09-2	
Naphthalene	<1.9	ug/L	5.0	1.9	1		05/11/23 17:43	91-20-3	
Styrene	<0.36	ug/L	1.0	0.36	1		05/11/23 17:43	100-42-5	
Tetrachloroethene	<0.41	ug/L	1.0	0.41	1		05/11/23 17:43	127-18-4	
Tetrahydrofuran	<2.4	ug/L	25.0	2.4	1		05/11/23 17:43	109-99-9	
Toluene	<0.29	ug/L	1.0	0.29	1		05/11/23 17:43	108-88-3	
Trichloroethene	48.8	ug/L	1.0	0.32	1		05/11/23 17:43	79-01-6	
Trichlorofluoromethane	<0.42	ug/L	1.0	0.42	1		05/11/23 17:43	75-69-4	
Vinyl chloride	<0.17	ug/L	1.0	0.17	1		05/11/23 17:43	75-01-4	
Xylene (Total)	<1.0	ug/L	3.0	1.0	1		05/11/23 17:43	1330-20-7	
cis-1,2-Dichloroethene	34.7	ug/L	1.0	0.47	1		05/11/23 17:43	156-59-2	
cis-1,3-Dichloropropene	<0.24	ug/L	1.0	0.24	1		05/11/23 17:43	10061-01-5	
trans-1,2-Dichloroethene	0.96J	ug/L	1.0	0.53	1		05/11/23 17:43	156-60-5	
trans-1,3-Dichloropropene	<0.27	ug/L	1.0	0.27	1		05/11/23 17:43	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	107	%	70-130		1		05/11/23 17:43	460-00-4	
1,2-Dichlorobenzene-d4 (S)	98	%	70-130		1		05/11/23 17:43	2199-69-1	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261810

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Sample: MW-10D (BAILER)      Lab ID: 40261810003      Collected: 05/05/23 13:30      Received: 05/06/23 09:05      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260 Pace Analytical Services - Green Bay								
<b>Surrogates</b> Toluene-d8 (S)	101	%	70-130		1		05/11/23 17:43	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261810

QC Batch: 444339 Analysis Method: EPA 8260

QC Batch Method: EPA 8260 Analysis Description: 8260 MSV

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40261810002, 40261810003

METHOD BLANK: 2550891 Matrix: Water

Associated Lab Samples: 40261810002, 40261810003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.30	1.0	05/11/23 09:33	
1,1,2-Trichloroethane	ug/L	<0.34	1.0	05/11/23 09:33	
1,1-Dichloroethane	ug/L	<0.30	1.0	05/11/23 09:33	
1,1-Dichloroethene	ug/L	<0.58	1.0	05/11/23 09:33	
1,2-Dibromo-3-chloropropane	ug/L	<2.4	5.0	05/11/23 09:33	
1,2-Dibromoethane (EDB)	ug/L	<0.31	1.0	05/11/23 09:33	
1,2-Dichlorobenzene	ug/L	<0.33	1.0	05/11/23 09:33	
1,2-Dichloroethane	ug/L	<0.29	1.0	05/11/23 09:33	
1,2-Dichloropropane	ug/L	<0.45	1.0	05/11/23 09:33	
1,3-Dichlorobenzene	ug/L	<0.35	1.0	05/11/23 09:33	
1,4-Dichlorobenzene	ug/L	<0.89	1.0	05/11/23 09:33	
2-Butanone (MEK)	ug/L	<6.5	25.0	05/11/23 09:33	
Acetone	ug/L	<8.6	25.0	05/11/23 09:33	
Benzene	ug/L	<0.30	1.0	05/11/23 09:33	
Bromodichloromethane	ug/L	<0.42	1.0	05/11/23 09:33	
Bromoform	ug/L	<0.43	1.0	05/11/23 09:33	
Bromomethane	ug/L	<1.2	5.0	05/11/23 09:33	
Carbon disulfide	ug/L	<0.65	1.0	05/11/23 09:33	
Carbon tetrachloride	ug/L	<0.37	1.0	05/11/23 09:33	
Chlorobenzene	ug/L	<0.86	1.0	05/11/23 09:33	
Chloroethane	ug/L	<1.4	5.0	05/11/23 09:33	
Chloroform	ug/L	<0.50	5.0	05/11/23 09:33	
Chloromethane	ug/L	<1.6	5.0	05/11/23 09:33	
cis-1,2-Dichloroethene	ug/L	<0.47	1.0	05/11/23 09:33	
cis-1,3-Dichloropropene	ug/L	<0.24	1.0	05/11/23 09:33	
Dibromochloromethane	ug/L	<2.6	5.0	05/11/23 09:33	
Dibromomethane	ug/L	<0.99	5.0	05/11/23 09:33	
Dichlorodifluoromethane	ug/L	<0.46	5.0	05/11/23 09:33	
Ethylbenzene	ug/L	<0.33	1.0	05/11/23 09:33	
Methyl-tert-butyl ether	ug/L	<1.1	5.0	05/11/23 09:33	
Methylene Chloride	ug/L	<0.32	5.0	05/11/23 09:33	
Naphthalene	ug/L	<1.9	5.0	05/11/23 09:33	
Styrene	ug/L	<0.36	1.0	05/11/23 09:33	
Tetrachloroethene	ug/L	<0.41	1.0	05/11/23 09:33	
Tetrahydrofuran	ug/L	<2.4	25.0	05/11/23 09:33	
Toluene	ug/L	<0.29	1.0	05/11/23 09:33	
trans-1,2-Dichloroethene	ug/L	<0.53	1.0	05/11/23 09:33	
trans-1,3-Dichloropropene	ug/L	<0.27	1.0	05/11/23 09:33	
Trichloroethene	ug/L	<0.32	1.0	05/11/23 09:33	
Trichlorofluoromethane	ug/L	<0.42	1.0	05/11/23 09:33	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261810

METHOD BLANK: 2550891

Matrix: Water

Associated Lab Samples: 40261810002, 40261810003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Vinyl chloride	ug/L	<0.17	1.0	05/11/23 09:33	
Xylene (Total)	ug/L	<1.0	3.0	05/11/23 09:33	
1,2-Dichlorobenzene-d4 (S)	%	98	70-130	05/11/23 09:33	
4-Bromofluorobenzene (S)	%	107	70-130	05/11/23 09:33	
Toluene-d8 (S)	%	101	70-130	05/11/23 09:33	

LABORATORY CONTROL SAMPLE: 2550892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.0	100	70-134	
1,1,2-Trichloroethane	ug/L	50	49.1	98	70-130	
1,1-Dichloroethane	ug/L	50	51.2	102	70-130	
1,1-Dichloroethene	ug/L	50	56.8	114	74-131	
1,2-Dibromo-3-chloropropane	ug/L	50	42.8	86	64-137	
1,2-Dibromoethane (EDB)	ug/L	50	45.9	92	70-130	
1,2-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,2-Dichloroethane	ug/L	50	49.7	99	70-137	
1,2-Dichloropropane	ug/L	50	49.4	99	80-121	
1,3-Dichlorobenzene	ug/L	50	49.4	99	70-130	
1,4-Dichlorobenzene	ug/L	50	48.5	97	70-130	
Benzene	ug/L	50	52.0	104	70-130	
Bromodichloromethane	ug/L	50	49.0	98	70-130	
Bromoform	ug/L	50	42.2	84	70-130	
Bromomethane	ug/L	50	56.3	113	21-147	
Carbon disulfide	ug/L	50	49.9	100	70-130	
Carbon tetrachloride	ug/L	50	48.1	96	80-146	
Chlorobenzene	ug/L	50	48.4	97	70-130	
Chloroethane	ug/L	50	63.7	127	52-165	
Chloroform	ug/L	50	51.0	102	80-123	
Chloromethane	ug/L	50	54.4	109	51-122	
cis-1,2-Dichloroethene	ug/L	50	47.9	96	70-130	
cis-1,3-Dichloropropene	ug/L	50	48.0	96	70-130	
Dibromochloromethane	ug/L	50	42.5	85	70-130	
Dichlorodifluoromethane	ug/L	50	43.4	87	25-121	
Ethylbenzene	ug/L	50	52.7	105	80-120	
Methyl-tert-butyl ether	ug/L	50	52.0	104	70-130	
Methylene Chloride	ug/L	50	56.0	112	70-130	
Styrene	ug/L	50	58.5	117	70-130	
Tetrachloroethene	ug/L	50	43.5	87	70-130	
Toluene	ug/L	50	49.7	99	80-120	
trans-1,2-Dichloroethene	ug/L	50	55.8	112	70-130	
trans-1,3-Dichloropropene	ug/L	50	47.3	95	70-130	
Trichloroethene	ug/L	50	50.8	102	70-130	
Trichlorofluoromethane	ug/L	50	54.0	108	65-160	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261810

LABORATORY CONTROL SAMPLE: 2550892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	50	58.4	117	63-134	
Xylene (Total)	ug/L	150	149	99	70-130	
1,2-Dichlorobenzene-d4 (S)	%			96	70-130	
4-Bromofluorobenzene (S)	%			105	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 2552149      2552150

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40261811002	Result	Spike Conc.	MSD Spike Conc.						
1,1,1-Trichloroethane	ug/L	<0.30	50	50	48.3	49.9	96	99	70-134	3	20
1,1,2-Trichloroethane	ug/L	<0.34	50	50	47.5	48.8	95	98	70-130	3	20
1,1-Dichloroethane	ug/L	<0.30	50	50	51.8	51.8	104	104	70-130	0	20
1,1-Dichloroethene	ug/L	<0.58	50	50	55.0	56.1	110	112	71-130	2	20
1,2-Dibromo-3-chloropropane	ug/L	<2.4	50	50	42.4	43.2	85	86	51-141	2	20
1,2-Dibromoethane (EDB)	ug/L	<0.31	50	50	45.1	45.9	90	92	70-130	2	20
1,2-Dichlorobenzene	ug/L	<0.33	50	50	49.3	49.3	99	99	70-130	0	20
1,2-Dichloroethane	ug/L	<0.29	50	50	47.7	52.7	95	105	70-137	10	20
1,2-Dichloropropane	ug/L	<0.45	50	50	48.1	50.1	96	100	80-121	4	20
1,3-Dichlorobenzene	ug/L	<0.35	50	50	49.5	50.0	99	100	70-130	1	20
1,4-Dichlorobenzene	ug/L	<0.89	50	50	47.6	47.7	95	95	70-130	0	20
Benzene	ug/L	<0.30	50	50	51.0	52.1	102	104	70-130	2	20
Bromodichloromethane	ug/L	<0.42	50	50	48.0	49.0	96	98	70-130	2	20
Bromoform	ug/L	<0.43	50	50	40.1	41.1	80	82	70-133	2	20
Bromomethane	ug/L	<1.2	50	50	59.3	60.3	119	121	21-149	2	22
Carbon disulfide	ug/L	<0.65	50	50	48.1	49.6	96	99	70-130	3	20
Carbon tetrachloride	ug/L	<0.37	50	50	46.9	47.9	94	96	80-146	2	20
Chlorobenzene	ug/L	<0.86	50	50	47.2	48.1	94	96	70-130	2	20
Chloroethane	ug/L	<1.4	50	50	57.6	58.6	115	117	52-165	2	20
Chloroform	ug/L	<0.50	50	50	49.9	50.4	100	101	80-123	1	20
Chloromethane	ug/L	<1.6	50	50	50.9	53.0	102	106	42-125	4	20
cis-1,2-Dichloroethene	ug/L	<0.47	50	50	48.0	48.2	96	96	70-130	0	20
cis-1,3-Dichloropropene	ug/L	<0.24	50	50	47.6	48.8	95	98	70-130	2	20
Dibromochloromethane	ug/L	<2.6	50	50	41.6	42.8	83	86	70-130	3	20
Dichlorodifluoromethane	ug/L	<0.46	50	50	43.2	43.8	86	88	25-121	1	20
Ethylbenzene	ug/L	<0.33	50	50	51.2	51.8	102	104	80-121	1	20
Methyl-tert-butyl ether	ug/L	<1.1	50	50	50.4	52.1	101	104	70-130	3	20
Methylene Chloride	ug/L	<0.32	50	50	55.8	57.3	112	115	70-130	3	20
Styrene	ug/L	<0.36	50	50	57.0	58.4	114	117	70-132	3	20
Tetrachloroethene	ug/L	2.6	50	50	44.8	47.0	84	89	70-130	5	20
Toluene	ug/L	<0.29	50	50	48.1	48.8	96	98	80-120	1	20
trans-1,2-Dichloroethene	ug/L	<0.53	50	50	54.3	55.1	109	110	70-130	2	20
trans-1,3-Dichloropropene	ug/L	<0.27	50	50	45.7	45.9	91	92	70-130	0	20
Trichloroethene	ug/L	1.7	50	50	52.2	52.5	101	102	70-130	1	20

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 60485031 SCHUSTER DRIVE  
Pace Project No.: 40261810

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		2552149		2552150									
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40261811002	Spike Conc.	Spike Conc.	MS Result								
Trichlorofluoromethane	ug/L	<0.42	50	50	52.8	54.1	106	108	65-160	2	20		
Vinyl chloride	ug/L	<0.17	50	50	57.1	57.0	114	114	60-137	0	20		
Xylene (Total)	ug/L	<1.0	150	150	145	149	96	99	70-130	3	20		
1,2-Dichlorobenzene-d4 (S)	%						99	98	70-130				
4-Bromofluorobenzene (S)	%						104	106	70-130				
Toluene-d8 (S)	%						100	100	70-130				

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## REPORT OF LABORATORY ANALYSIS

## QUALIFIERS

Project: 60485031 SCHUSTER DRIVE

Pace Project No.: 40261810

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60485031 SCHUSTER DRIVE  
 Pace Project No.: 40261810

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40261810002	TW-15 (BAILER)	EPA 8260	444339		
40261810003	MW-10D (BAILER)	EPA 8260	444339		

## REPORT OF LABORATORY ANALYSIS

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

40261810

Page: 1 of 1

## Section A Required Client Information

## Section B Required Project Information

## Section C Invoice Information

Company: AECOM - Milw	Report To <b>Tory Schultz</b>	Attention <b>USA PT IMAGING @ AECOM . com</b>
Address: 1555 N. River Center Dr , Suite 214	Copy To	Company Name <b>Same</b>
Milwaukee, WI 53212		Address <b>Same</b>
Email To <b>tory.schultz@AECOM.com</b>	Purchase Order No :	Pace Quote Reference
Phone <b>414-690-8405</b>	Fax	Project Name <b>Schuster Drive</b>
Requested Due Date/TAT: Standard	Project Number <b>60465031</b>	Pace Profile #

REGULATORY AGENCY											
<input type="checkbox"/> NPDES		<input checked="" type="checkbox"/> GROUND WATER		DRINKING WATER							
<input type="checkbox"/> UST		<input type="checkbox"/> RCRA		OTHER							
<input type="checkbox"/> SITE		<input type="checkbox"/> GA		<input type="checkbox"/> IL		<input type="checkbox"/> IN		<input type="checkbox"/> MI		<input type="checkbox"/> NC	
<input type="checkbox"/> LOCATION		<input type="checkbox"/> OH		<input type="checkbox"/> SC		<input checked="" type="checkbox"/> WI		<input type="checkbox"/> OTHER			
Filtered (Y/N) <input type="checkbox"/> N <input type="checkbox"/> N <input type="checkbox"/> N <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N											
Requested Analytes <input type="checkbox"/> VOCs 8260 <input type="checkbox"/> TOC <input type="checkbox"/> Alkalinity, Cl, SO <sub>4</sub> <input type="checkbox"/> Methane/Ethane/Ethene <input type="checkbox"/> Total Metals <input type="checkbox"/> Diss. Metals <input type="checkbox"/> Silica <input type="checkbox"/> COD <input type="checkbox"/> Residual Chlorine (Y/N)											
Pace Project Number Lab I.D.											
ITEM #	Required Client Information										
SAMPLE ID One Character per box (A-Z, 0-9 / .) Samples IDs MUST BE UNIQUE											
1 2 3 4 5 6 7 8 9 10 11 12	Valid Matrix Codes  MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE SAMPLE TYPE G=GRAB C=COMP	COLLECTED				SAMPLE TEMP AT COLLECTION #OF CONTAINERS  Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> SO <sub>3</sub> Methanol Other	Preservatives	Requested An:  WT 6 05/05/2000 2023 2 2 WT 1 1430 3 3 WT 3 1330 3 3 WT WT WT WT WT WT WT WT WT WT WT WT	2 3 3 WT WT WT WT WT WT WT WT WT WT WT	001 002 003
			WT	6	05/05/2000	2023					
			WT	1	1430						
			WT	3	1330						
			WT								
			WT								
			WT								
			WT								
			WT								
			WT								
			WT								
			WT								

Additional Comments:

[REDACTED]

[REDACTED]

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>Ken AECOM</i>	05/05	1900	<i>CS Logistics</i>	9/6/23	0900	<input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N
						<input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N
						<input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N
						<input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N <input type="checkbox"/> Y/N

\* HOLD ANALYSIS of  
item "Trip Blank (boiler)"  
for Tory Schultz approval \*

SAMPLER NAME AND SIGNATURE				Temp in °C
PRINT Name of SAMPLER	<i>Keith Nielsen</i>			
SIGNATURE of SAMPLER	<i>Keith Nielsen</i>			Received on Paper
DATE Signed (MM / DD / YY)				Received on Cooler
<i>05/05/23</i>				Received on Samples Intact

## Sample Preservation Receipt Form

Project # 402461810Client Name: AECOM

All containers needing preservation have been checked and noted below:

Lab Lot# of pH paper:

Yes  No  N/A

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/  
Time:

Pace Lab #	Glass					Plastic				Vials				Jars			General		VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)			
001	AG1U	BG1U	AG1H	AG4S	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	BP2Z	VG9C	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN 1	GN 2	2.5 / 5
002																											2.5 / 5	
003																											2.5 / 5	
004																											2.5 / 5	
005																											2.5 / 5	
006																											2.5 / 5	
007																											2.5 / 5	
008																											2.5 / 5	
009																											2.5 / 5	
010																											2.5 / 5	
011																											2.5 / 5	
012																											2.5 / 5	
013																											2.5 / 5	
014																											2.5 / 5	
015																											2.5 / 5	
016																											2.5 / 5	
017																											2.5 / 5	
018																											2.5 / 5	
019																											2.5 / 5	
020																											2.5 / 5	

Exceptions to preservation check:  Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:Headspace in VOA Vials (>6mm)  Yes  No  N/A

\*If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	VG9C	40 mL clear ascorbic w/ HCl	JGFU	4 oz amber jar unpres
BG1U	1 liter clear glass	BP3U	250 mL plastic unpres	DG9T	40 mL amber Na Thio	JG9U	9 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP3B	250 mL plastic NaOH	VG9U	40 mL clear vial unpres	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9H	40 mL clear vial HCL	WPFU	4 oz plastic jar unpres
AG5U	100 mL amber glass unpres	BP3S	250 mL plastic H2SO4	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH + Zn	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres					GN 1	
						GN 2	

Page 1 of 2

## Sample Condition Upon Receipt Form (SCUR)

Project #: Client Name: AECOMCourier:  CS Logistics  Fed Ex  Speedee  UPS  Waltco  
 Client  Pace Other: \_\_\_\_\_

WO# : 40261810



40261810

Tracking #: \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noCustody Seal on Samples Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  OtherThermometer Used SR - 129 Type of Ice: Wet Blue Dry None  Meltwater Only

Cooler Temperature Uncorr: 0.0 /Corr: 0.0

Temp Blank Present:  yes  no Biological Tissue is Frozen:  yes  no

Temp should be above freezing to 6°C.

Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:

Date: 5/6/23 /Initials: dRJ

Labeled By Initials: SG

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: - DI VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Correct Type <u>Pace Green Bay</u> Pace IR, Non-Pace		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>499</u>		

## Client Notification/ Resolution:

If checked, see attached form for additional comments 

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample log!

Page 2 of 2